

XLIV.—*A new Freshwater Gammarid from New Zealand.*

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[Plate XI.]

THROUGH the kindness of Mr. J. Crosby Smith, of Invercargill, I am able to describe a new Gammarid from the surface freshwaters of New Zealand. He obtained it from a small pool near the top of Mt. Anglem in Stewart Island at a height of about 2800 feet above sea-level. Unfortunately only one specimen was obtained; however, this is quite sufficient for me to identify the animal satisfactorily, and as it is undoubtedly different from any Gammarid hitherto described from the freshwaters of New Zealand, I venture to describe it as a new species. It is evidently pretty closely allied to the subterranean species *Phreatogammarus fragilis*, and I am referring it to that genus, though it differs from the definition of the genus as given by Mr. Stebbing in having the first gnathopod distinctly smaller than the second and of distinctly different form, for in his generic diagnosis Mr. Stebbing says "First and second gnathopods equal"*. His diagnosis was, however, drawn up from the single type species, and where a genus is based on minute points of difference as exhibited by a single species it is easy to restrict the characters of a genus too narrowly. I give a brief specific diagnosis and a fuller description of some points in the single specimen I have examined.

Phreatogammarus propinquus, sp. n.

(Pl. XI. figs. 1-6.)

In general appearance, antennæ, peræopoda, and uropoda closely resembling *P. fragilis*, but differing in the gnathopoda. First gnathopod smaller than second and of different form, having carpus longer than propod, the latter widening distally and with palm transverse. Second gnathopod with carpus short, subtriangular; propod twice as long as carpus, ovoid; palm very oblique.

Colour "nearly white."

Length of body 5 mm.

Hab. Small pool near top of Mt. Anglem, 2800 ft. above sea, Stewart Island, New Zealand.

* 'Das Tierreich,' Amphipoda, I. Gammaridea, p. 453.

Remarks.—I have given above the points that seem to distinguish this species from *P. fragilis*. The following fuller account is based on the single specimen before me :—

Body rather slender ; pleon-segments 4 to 6 with one or two fine hair-like setæ on dorsal surface, the fourth with a stout spine on lower margin. Head without rostrum. First antenna rather more than half as long as the body, first joint with a tuft of small tactile setæ on the upper margin near the base, a few hair-like setæ at the distal end, and a small spine-like one on lower side of distal end ; second joint about two thirds the length of first, with some slender setæ at extremity ; third joint about half as long as second ; flagellum of about twenty joints, about twice as long as peduncle ; accessory flagellum of four joints. Second antenna about two thirds as long as first ; flagellum shorter than peduncle.

I have not examined the mouth-parts in detail, but they appear to be closely similar to those of *P. fragilis*.

First gnathopod smaller than the second ; carpus longer than propod, suboblong, posterior margin densely fringed with setæ, a few on the anterior margin ; propod widening towards distal end, where its width is about equal to its length ; palm transverse, well defined, with a few small spine-like setæ and some long hairs ; dactyl rather stout. Second gnathopod with carpus short, triangular, produced on posterior side into a rounded lobe bearing several fine setæ ; propod about twice as long as carpus, ovoid, narrowing distally, palm very oblique, occupying two thirds length of posterior margin, supplied with a double row of spine-like setæ and a few fine hairs ; dactyl rather stout, closely serrate on inner margin. The third to fifth peræopoda moderately long, but not greatly increasing in length posteriorly, the last reaching as far as the end of pleon ; in each the second joint (basos) is moderately broad, about two thirds as broad as long.

First uropod with peduncle longer than the rami, its upper margin with three small spines and a large one at extremity ; rami equal, each with a few spine-like setæ ; second uropod similar, but with peduncle only as long as rami ; third uropod extending much beyond the others, peduncle only about one half as long as rami, which are equal, not narrowing distally, and each with two groups of three spines and a terminal tuft of setæ. Lobes of telson with the posterior margin rounded and bearing two or three fine hairs.

When alive the animal was, Mr. Crosby Smith says,

"nearly white" in colour; whether it is blind or not I cannot say for certain, but I can find no undoubted indications of eyes in the specimen before me.

EXPLANATION OF PLATE XI.

Phreatogammarus propinquus, sp. n.

Fig. 1. First antenna, $\times 60$.

Fig. 2. Second antenna, $\times 60$.

Fig. 3. First gnathopod, $\times 105$.

Fig. 4. Second gnathopod, $\times 105$.

Fig. 5. Fourth peræopod, $\times 60$.

Fig. 6. End of pleon with uropoda, $\times 60$.

XLV.—*On Barbus aureus*, Cope, from Natal.

By G. A. BOULENGER, F.R.S.

A FISH obtained by Dr. Alden Grout at Umvoti, near the boundary between Natal and Zululand, was described by the late Prof. E. D. Cope in 1869 (Tr. Amer. Philos. Soc. (2) xiii. p. 406) under the name of *Labeobarbus aureus*. The original description was so meagre as to make it impossible to assign the species its position in the system. Having recently had to describe several new Barbels from the eastern parts of South Africa, I felt extremely anxious to know something more of this *Labeobarbus aureus*, the types of which are preserved in the Museum of the Academy of Natural Sciences, Philadelphia. In answer to an application made through my friend Dr. A. Erwin Brown, I have been favoured by the Curator of the Museum with the loan of one of the types, from which I have drawn up the following definition. The other specimen, which I have not seen, has been compared by Mr. W. H. Fowler, who states that he can detect no difference of any importance between the two.

The fish is not referable to the group named *Labeobarbus* by Rüppell. It has the thin lips and the trenchant lower jaw which characterize the genus *Capoëta* as defined by Günther; but its affinities are with *L. Bowkeri*, Blgr., from Natal, which has the edge of the lower jaw rounded and the lower lip continuous across the chin. It affords a further instance of the unsatisfactory arrangement of the species of this genus according to the structure of the mouth and lips, to which I have alluded on previous occasions when describing species from Morocco, Abyssinia, East Africa, and the Transvaal,